

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010381**Date Inspected:** 22-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Bo**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Crossbeams**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

**OBG CROSS BEAM CB1**

This crossbeam appears to be complete and has been loaded on the ship.

**OBG CROSS BEAM CB2**

This crossbeam appears to be complete and has been loaded on the ship.

**OBG CROSS BEAM CB3**

This crossbeam appears to be complete and has been loaded on the ship.

**OBG CROSS BEAM CB4**

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

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### OBG CROSS BEAM CB5

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB6

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB8

This QA observed ZPMC qualified welding personnel identified as 058174 perform FCAW repair welding on weld joint identified as CB202A-008-005. The repairs being performed were discovered visually by ZPMC QC inspectors. ZPMC QC identified as Mr. Lui Chuan Gang was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-345-FCAW-2G (2F)-repair.

This QA observed ZPMC qualified welding personnel identified as 053742 perform FCAW repair welding on weld joint identified as CB202A-008-017. The repairs being performed were discovered visually by ZPMC QC inspectors. ZPMC QC identified as Mr. Lui Chuan Gang was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-345-FCAW-2G (2F)-repair.

### OBG CROSS BEAM CB9

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB13

This Quality Assurance Inspector (QA) observed the contractors welding personnel tack weld a temporary fixture to the SPCM portion of the east side panel of crossbeam CB13. The SPCM is identified as SP202A. This QA observed the worker did not preheat the material prior to tack welding. This QA also observed that there did not appear to be an applicable WPS available for review. This QA noted that the contractor has previously tack welded three (3) temporary fixtures each on SPCM panels identified as SP205A and FB202A. See attached photos for details. AWS D1.5 2002 section 12, table 12.2 requires FCW tack welds outside the joint to be performed to an applicable WPS and the minimum preheat to be per table 12.3, 12.4 or 12.5. AWS D1.5 section 12, table 12.3 specifies the minimum preheat shall be 40 oC to 100 oC depending on the calculated heat input and the diffusible hydrogen of the electrode. This QA notified ZPMC QC CWI identified as Mr. Sun Bo and ABF QA inspector identified as Mr. Zou Hu of this issue and that an incident report would be generated.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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### Summary of Conversations:

As mentioned above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (15000422372), who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hall,Steven	Quality Assurance Inspector
<b>Reviewed By:</b>	Patterson,Rodney	QA Reviewer

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